



FY2023 Annual Report Review

EMT Board Meeting
November 15, 2023

FY2023 Highlights

- Invested **\$85 million** in programs (vs. \$70 million in FY2022)
- Reached a milestone of promoting nearly **101,000** high-performance heat pumps installed since July 2019, and nearly **150,000** in total over the past 10 years
- Significantly expanded weatherization activity, supporting projects in **3,441** homes (**867** low- and moderate-income) vs. 2,230 homes in FY 2022 (391 LMI)
- Jumpstarted a period of significant investment of federal funds
- Expanded the Efficiency Maine Green Bank (launched C-PACE, municipal lease offering, equipment lease for heat pumps in manufactured homes)
- Discontinued incentives for screw-in LED bulbs after market transformation
- Witnessed significant policy change with the Beneficial Electrification Policy Act

Electric Program Expenditures

Major Program	Incentive	Delivery	Total
Commercial and Industrial Custom Program – Electric	\$1,714,716	\$713,472	\$2,428,188
Commercial and Industrial Prescriptive Initiatives – Electric	\$8,792,966	\$1,836,152	\$10,629,118
Distributor Initiatives – Electric	\$7,555,337	\$1,061,581	\$8,616,918
Retail Initiatives – Electric	\$4,947,659	\$2,079,725	\$7,027,385
Home Energy Savings Program – Electric	\$12,827,500	\$2,242,648	\$15,070,148
Low-Income Initiatives – Electric	\$1,061,710	\$518,241	\$1,579,951
Demand Management Program	\$262,185	\$208,485	\$470,670
Strategic Initiatives – Electric	-	\$1,147,774	\$1,147,774
Administration – Electric	-	\$1,680,723	\$1,680,723
Total	\$37,162,073	\$11,488,802	\$48,650,874

Thermal Program Expenditures

Major Program	Incentive	Delivery	Total
Commercial and Industrial Custom Program – Natural Gas	\$204,979	\$62,860	\$267,839
Commercial and Industrial Custom Program – Unregulated Fuels	\$1,475,573	\$417,992	\$1,893,565
Commercial and Industrial Prescriptive Initiatives – Natural Gas	\$359,187	\$9,961	\$369,148
Commercial and Industrial Prescriptive Initiatives – Unregulated Fuels	\$2,653,858	\$557,583	\$3,211,441
Distributor Initiatives – Natural Gas	\$26,600	\$384	\$26,984
Home Energy Savings Program – Natural Gas	\$539,492	-	\$539,492
Home Energy Savings Program – Unregulated Fuels	\$9,380,373	\$1,565,658	\$10,946,031
Low-Income Initiatives – Natural Gas	\$13,482	-	\$13,482
Low-Income Initiatives – Unregulated Fuels	\$9,139,677	\$3,295,444	\$12,435,120
Electric Vehicle Initiatives – EV Rebates	\$1,570,000	\$118,587	\$1,688,587
Strategic Initiatives – Thermal	-	\$632,279	\$632,279
Administration – Thermal	-	\$2,588,355	\$2,588,355
Total	\$25,363,220	\$9,249,102	\$34,612,322

Other Initiatives Expenditures

Initiative	Incentive	Delivery	Total
Efficiency Maine Green Bank	-	\$747,964	\$747,964
Lead By Example Initiative	\$54,732	\$251,266	\$305,998
Agricultural Fair Assistance Program	\$8,000	\$1,920	\$9,920
Thermal Energy Investment Program	\$6,591	-	\$6,591
High-Performance Affordable Housing Pilot	\$278,302	-	\$278,302
Electric Vehicle Initiatives – EV Supply Equipment	\$777,576	\$4,591	\$782,166
Administration – Other	-	\$36,750	\$36,750
Total	\$1,125,201	\$1,042,491	\$2,167,692

Electric Program Benefit-to-Cost Ratios

Major Program	B:C Ratio
Commercial and Industrial Custom Program – Electric	2.32
Commercial and Industrial Prescriptive Initiatives – Electric	3.39
Distributor Initiatives – Electric	3.34
Retail Initiatives – Electric	2.56
Home Energy Savings Program – Electric	1.48
Low-Income Initiatives – Electric	4.01
Demand Management Program	2.67
Total	1.98

Thermal Program Benefit-to-Cost Ratios

Major Program	B:C Ratio
Commercial and Industrial Custom Program – Natural Gas	2.17
Commercial and Industrial Custom Program – Unregulated Fuels	4.43
Commercial and Industrial Prescriptive Initiatives – Natural Gas	14.81
Commercial and Industrial Prescriptive Initiatives – Unregulated Fuels	1.95
Distributor Initiatives – Natural Gas	2.49
Home Energy Savings Program – Natural Gas	0.83
Home Energy Savings Program – Unregulated Fuels	1.51
Low-Income Initiatives – Natural Gas	1.10
Low-Income Initiatives – Unregulated Fuels	1.34
Electric Vehicle Initiatives – EV Rebates	1.74
Total	1.90

C&I Custom Program

Highlights:

- Launched a targeted offering for manufacturers to invest MJRP/ARPA funds (focusing on beneficial electrification and heat recovery).
- Supported continued interest from cannabis cultivation facilities; transitioned additional cannabis lighting projects to C&I Prescriptive Initiatives.
- Experienced continued interest in snowmaking equipment and microsteam turbine technology.

Plans:

- Design and launch a program offering to detect and mitigate compressed air leakage, targeting a significant untapped opportunity.
- Launch an online application process to streamline data collection and improve participant experience.

C&I Prescriptive Initiatives

Highlights:

- Added heat pump rooftop units (RTUs) and commercial heat pump water heaters.
- Introduced weatherization measures for multifamily buildings.
- Discontinued incentives for screw-in LED bulbs.
- Ran 4 MJRP/ARPA-funded campaigns targeting (1) small municipalities, (2) long-term care facilities, (3) hospitality businesses, and (4) PreK-12 public schools.
- Adjusted multifamily eligibility for all C&I Prescriptive Initiatives from ≥ 5 units to ≥ 3 units.
- Launched a targeted initiative to accelerate whole-building electrification and weatherization in multifamily buildings with 3-15 units.
- Cultivated growing interest in “virtual” consultations

Plans:

- Shift incentives to a whole-building/whole-zone approach for heat pumps.
- Plan for new federal IRA Rebate funds allocated for multifamily buildings

Distributor Initiatives

Highlights:

- Recruited all plumbing distributors in the state to offer heat pump water heater discounts.
- Processed 6,217 instant discounts for heat pump water heaters (similar to FY2022).
- Launched a campaign encouraging customers to “Buy a heat pump water heater and give your boiler the summer off.”
- Provided discounts for 14,777 ECM circulator pumps (up from 11,204 in FY2022).
- Largest distributor declined to participate in natural gas program for FY2023.

Plans:

- Suspend incentives for natural gas measures
- Attempt to capture more market share and increase uptake of ECM circulator pumps

Retail Initiatives

Highlights:

- Collaborated directly with retailers to make heat pump water heaters cost-competitive with electric resistance water heaters after instant discount and negotiated lowest MSRPs in the country.
- Instant discount became primary rebate type for heat pump water heaters.
- Processed 2,413 incentives for heat pump water heaters (up from 1,724 in FY2022)
- Launched a campaign encouraging customers to “Buy a heat pump water heater and give your boiler the summer off.”
- Ended LED discounts.

Plans:

- Promote heat pump water heaters to customers interested in switching away from heating domestic hot water from the central boilers, as well as customers with water heaters at or near the end of their useful life.
- Suspend rebates for room air purifiers to focus program efforts on, and available funding for, heat pump water heaters.

Home Energy Savings Program

Highlights:

- Incentivized a record 28,053 heat pump equivalents (vs. 24,400 in FY2022)
- Incentivized 4,748 building-envelope measures (vs. 3,446 in FY2022)
- Grew the Residential Registered Vendor (RRV) Network from 902 active vendors at the beginning of the fiscal year to 1,041.
- Collaborated with the Low-Income Initiatives team to launch a moderate-income rebate tier for weatherization rebates.
- Collaborated with the Retail Initiatives and Public Information and Outreach teams on a do-it-yourself (DIY) winterization campaign.

Plans:

- Shift program to focus on whole-home approach for heat pumps.
- Adjust multifamily eligibility from 2-4 units to 2 units only and add condominiums.
- Leverage RGGI to fund weatherization projects in homes served by natural gas.

Low-Income Initiatives

Highlights:

- Replaced larger share of tankless coil systems than electric resistance water heaters in the direct installation initiative for heat pump water heaters.
- Launched a separate moderate-income pathway for weatherization. Program activity grew substantially (867 homes in FY2023 vs. 140 in FY2021 and 385 in FY2022).
- Continued to refine online form for verifying income-based eligibility (launched late FY2022) to help individuals “opt in” to enhanced incentives.
- Observed a considerable slowdown in the number of DIY energy-saving kit request fulfillments (5,341 in FY2023 vs. 20,052 in FY2022)

Plans:

- Shift program to focus on whole-home approach for heat pumps.
- Design, plan, and launch initiatives to incorporate federal IRA funds where applicable.
- Work with MaineHousing to provide an education and outreach program to residents of manufactured homes to increase awareness of offerings.

Electric Vehicle Initiatives – Public Charging

Highlights:

- Collaborated with MaineDOT, GEO, GOPIF and DEP to brand the State's efforts to establish a public network of EV chargers as "Recharge Maine."
- Collaborated on development of Maine's EV Charging Infrastructure Plan (prerequisite for Maine to receive its share National EV Infrastructure [NEVI] funds)
- Supported MaineDOT's application for \$15 million in Charging and Fueling Infrastructure Discretionary Grant Program funds.
- Launched RFP to invest the first round of NEVI funds in DC fast-charging projects.
- Leveraging MJRP/ARPA funds, awarded 4 DC fast-charging projects (15 plugs) and 84 Level 2 community charging projects (217 plugs).

Plans:

- Invest federal funds in competitive solicitations for fast chargers and consider other EV charging investment, as funding allows.
- Support the installation and commissioning of charger sites awarded in FY2023.

Electric Vehicle Initiatives – Rebates

Highlights:

- Added a new pathway for moderate-income customers and significantly increased the rebate levels for low-income customers.
- Added new BEVs and PHEVs to the list of vehicles eligible for rebates.
- Continued to face supply chain disruptions, constraining vehicle inventory.

Plans:

- Develop and launch program changes to increase EV rebate uptake among business fleet customers.
- Review options for a pilot project promoting the use of e-bikes through organizations that serve low- and moderate-income customers.
- Develop and launch a medium- and heavy-duty EV demonstration project.

Demand Management Program

Highlights:

- Curtailment Service Providers (CSPs) in the Demand Response Initiative (DRI) captured 7.5 MW of curtailed load (67% of potential from 11.2 MW enrolled load).
- Selected Virtual Peaker for Distributed Energy Resource Management System (DERMS).

Plans:

- Oversee an expanded portfolio for the 2023 summer capacity season, with 15.3 MW of curtailable load and 174 participants (vs. 11.2 MW and 23 participants in 2022).
- Launch the Load Shifting Initiative and enroll participants in the residential managed EV charging measure.
- Boost outreach to battery manufacturers to ensure diversity of vendors and model options before launching incentives for small batteries.
- Transition the large battery measure from pilot status in the Innovation Program to program measure status in the Load Shifting Initiative.

Efficiency Maine Green Bank

Highlights:

- ***Home Energy Loans*** – limited availability to income-eligible applicants
- ***Small Business Energy Loans*** – leveraged for heat pump/VRF installations
- ***Commercial Property Assessed Clean Energy (C-PACE)*** – conducted rulemaking, published program guidelines, began onboarding capital providers and municipalities
- ***Municipal Lease*** – launched new “pairing” offering for municipalities and PreK-13 schools
- ***Manufactured Home Heat Pump Lease*** – launched as element of Innovation pilot

Plans:

- Develop applications/align with applicants for federal Greenhouse Gas Reduction Fund (GGRF) funds and plan for expansion of finance initiatives.
- Launch a battery lease offering.

Other Initiatives

Highlights:

- ***Non-Wires Alternatives (NWA)*** – Legislature enacted LD 1887, clarifying that substations are subject to the same NWA processes as any other part of the T&D system
- ***Renewables*** – Legislature enacted LD 187, eliminating the Energy Efficiency and Renewable Resource Fund (EERRF); remaining EERRF funds applied to Hydronic Heat Pump Pilot
- ***Lead by Example Initiative*** – Made 9 awards to help convert Maine state buildings currently heated with oil or propane to heat pump-based systems.
- ***Agricultural Fair Assistance Program*** – Made 14 awards for LEDs and HVAC retrofits.
- ***Thermal Energy Investment Program*** – Launched the program mid-year.
- ***High-Performance Affordable Housing Pilot*** – Monitored progress on 2 Passive House projects.
- ***School Decarbonization Program*** – Facilitated connections to C&I program offerings.

Evaluation, Measurement, and Verification (EM&V)

Highlights:

- Finalized the C&I Heat Pump Impact Evaluation.
- Reviewed preliminary results from the Residential Heat Pump Impact Evaluation.
- Completed an Advanced Metering Infrastructure (AMI) analysis of residential heat pump performance.
- Launched Multifamily AMI Analysis and Tool Development project.

Plans:

- Publish evaluation report for Residential Heat Pump Impact Evaluation.
- Launch the C&I Custom Program Evaluation.
- Initiate studies in support of Triennial Plan VI.

Innovation

Highlights:

- Concluded (1) Heat Pump Optimization with Integrated Controls Pilot, (2) Isle au Haut Thermal Energy Storage Load Management Pilot, and (3) Level 2 EV Smart Charging Pilot.
- Monitored the ongoing Commercial Split-System Heat Pump Water Heater Demonstration Pilot.
- Expanded the ongoing Whole-Home Heat Pump Solutions Pilot to include additional manufactured home sites and test a lease mechanism for a customer co-pay.
- Launched and monitored the Hydronic Heat Pump with Thermal Storage Pilot.
- Launched the Connected Communities Transactive Energy Pilot.

Plans:

- Expand Whole-Home Heat Pump Solutions Pilot to double-wides farther north.
- Incorporate large battery storage MACE measure in Demand Management Program.
- Launch Multifamily Split-System Heat Pump Water Heater Pilot.
- Conduct a feasibility assessment for a Vehicle-to-Grid pilot.

Goals and Themes for FY2024

- Plan for and deploy federal funds
 - Maine Jobs and Recovery Plan (MJRP)/American Rescue Plan Act (ARPA)
 - Inflation Reduction Act (IRA) Rebate Program
 - Greenhouse Gas Reduction Fund (GGRF)
 - National Electric Vehicle Infrastructure (NEVI) Program
 - Energy Efficiency Revolving Loan Fund
- Transition to whole-home/whole-building heat pump program design.
- Incorporate Beneficial Electrification Policy Act.
- Launch Triennial Plan VI process.

Legislative Recommendations

The Trust's authorizing statute provides that the Annual Report should include "Any recommendations for changes to the laws relating to energy conservation." (35-A MRSA §10104(4))

Recommended Motion

Move that the Board approve the FY2023 Annual Report, with any changes discussed and adopted at the November 15, 2023, Board meeting, as well as any non-substantive typographical edits or computational corrections as may be required prior to submission to the Public Utilities Commission and Legislature.